1. Can you describe the process you followed to design and develop the website for the fictional small business?

Ans:

When creating a website, there's no 'one size fits all' solution. You'll need to consider your goals before you get started, so that you can implement design elements and tools to achieve your objectives.

Step 1: Choose your website building platform

Ideally, you should opt for a user-friendly solution that will help you create a website without any coding knowledge.

Step 2: Pick your domain name

Your domain name should ideally align with your business name. If you're unsure of which name you should choose, there are several online generators that can provide you with some inspiration

Step 3: Select a theme or template

WordPress and Squarespace offer tons of templates (or themes) that you can easily customize. Many of them are free to use, too.

Step 4: Add your content

As you customize your website, you will likely want to add content almost immediately. Before you do that, it's wise to have a rough structure in mind.

Most business websites will need the following:

Homepage. This will be the first thing many visitors see when they come to your site. It should give a short overview of your services. Furthermore, it should include clear navigation to other sections.

Products, Services, or Portfolio page. This is where you will showcase your work and describe what you have to offer customers or clients.

About page. In this section, you'll include your story or share information about your team.

Contact page. Ideally, you'll want to include a contact form and encourage customers to get in touch if they have questions.

Step 5: Optimize your website for search engines

Once you have content available online, you still have to make sure people can find it. SEO is one strategy that can help with that.

Step 6: Publish your website

Many website builders enable you to keep your site private while you're building it, then publish it once it's ready for visitors.

2. What programming languages and technologies did you use to build the website?

Ans:

Languages:

HTML, CSS, JavaScript.

Software:

Sublime text.

3. How did you ensure that the website was responsive and mobile-friendly?

Ans:

1. Develop a responsive layout

A responsive layout lets the website scale its size to fit the user's device. It can adapt to various screen sizes, displaying relevant content while changing design as needed -- such as moving from a two-column layout on a desktop to a one-column design on a mobile device. If it's a responsive design, it shouldn't affect the loading time when adapting to the screen size. You can choose a mobile-responsive theme when building or updating your site.

2. Optimize website speed

Speed makes a big first impression on views. A website that loads in one second has a conversion rate three times higher than a site that loads in five seconds, according to a survey by Portent.

3. Compress images

When adding images to your site, don't forget to compress images to limit the file size and help with downloading speed. When compressing images, the amount of data that needs to load for viewing is reduced, increasing the website speed.

4. Use HTML5 instead of Adobe Flash

Adobe Flash is popular for animations; however, it is not supported by mobile devices. Avoid using Flash on your websites, and use HTML5 instead.

5. Avoid pop-ups

Pop-ups work well on desktop versions of websites, but not on mobile devices.

Pop-ups are hard to view on smaller screens, and you can't trigger pop-ups at certain moments -- such as when a user exits your site or hits the Contact Us section. It can also be difficult for users to close out of pop-ups from a mobile screen because the X in the corner might not be visible.

6. Change button size and placement

If a button is too small or in the wrong spot on a mobile website, it can be difficult to use. Most mobile device users use their thumbs for navigation, so buttons should be large enough to hit with a thumb.

7. Use a large and readable font

The recommended font size of at least 14 pixels for a desktop might not be large enough to be legible on a smaller screen. The best way to know if it's legible is to test it on a mobile device.

8. Space out links

Think about how hard it can be to accurately use your thumb to click a link as opposed to using a mouse. To help people click the link they want, space out your links.

9. Declutter web design

Don't clutter a website by adding multiple calls to action on one page. If there are too many actions for users to take, it can be difficult to navigate on a smaller screen and cause confusion. Use only the critical functions the users would actively look for, such as the contact form.

10. Test the website on mobile devices regularly

To make sure your website is mobile-friendly, there are multiple ways to test. First, test websites on mobile devices for user experience. Be sure to test using both Android and iOS devices.

4. Did you face any challenges during the development process, and if so, how did you address them?

Ans:

1. User Interface and User Experience

Think a decade ago, the web was a completely different place. Smartphones don't exist. Simpler and customer oriented web application are highly expected now. Sometimes it's the small UI elements that make the biggest impact. In the era of Smartphones, websites should be responsive enough on the smaller screens. If your web applications frustrate or confuse users, then it is difficult to maintain your customer's loyalty for your website.

2. Scalability

Scalability is neither performance nor it's about making good use of computing power and bandwidth. It's about load balancing between the servers, hence, when the load increases (i.e. more traffic on the page) additional servers can be added to balance it. You should not just throw all the load on a single server but you should design the software such that it can work on a cluster of servers.

3. Performance

Generally, it is accepted that website speed has the major importance for a successful website. When your business is online every second counts. Slow web applications are a failure. As a result, customers abscond your website thus, damaging your revenue as well as reputation. It is said that think about performance first before developing the web application. Some of the performance issues are Poorly written code, Un-Optimized Databases, Unmanaged Growth of data, Traffic spikes, Poor load distribution, Default configuration, Troublesome third party services, etc.

4. Knowledge of Framework and Platforms

Frameworks are the kick start for development languages: they boost performance, offer libraries of coding and extend capabilities, so developers need not do hand-coding web applications from the ground up.

5. Security

In the midst of design and user experience, web app security is often neglected. But security should be considered throughout the software development life cycle, especially when the application is dealing with the vital information such as payment details, contact information, and confidential data. There are many things to consider when it comes to web application security such as denial of service attacks, the safety of user data, database malfunctioning, unauthorized access to restricted parts of the website, etc.

5. Can you provide examples of how you used responsive design techniques to make the website look and function correctly on different devices and screen sizes?

Ans:

Responsive Web design is the approach that suggests that design and development should respond to the user's behavior and environment based on screen size, platform and orientation.

The practice consists of a mix of flexible grids and layouts, images and an intelligent use of CSS media queries. As the user switches from their laptop to iPad, the website should automatically switch to accommodate for resolution, image size and scripting abilities.

Responsive Web Design Examples

Responsive web design term is related to the concept of developing a website design in a manner that helps the layout to get changed according to the user's computer screen resolution. More precisely, the concept allows for an advanced 4 column layout 1292 pixels wide, on a 1025 pixel width screen, that auto-simplifies into 2 columns. Also, it suitably fixes on the smartphone and computer tablet screen. This particular designing technique we call *"responsive design"*.
Responsive website designing is an entirely different designing version than traditional web designing, and developers *(especially fresher)* must know about the pros and cons of responsive web designing. This blog is a mighty example of the approach so we will reveal a few facts about the uses of responsive web designing. The basic instinct might be to choose <u>media queries</u> to develop a responsive site. However, the hassle one faces with media queries is that new queries can pop up from moment to moment; each time, the user experiences sudden and drastic changes to the look and organization of the site. Experts suggest using some CSS transitions to ease the jump.

Pages that include data tables pose a special challenge to the responsive web designer. Data tables are extremely wide by default, and when someone zooms out to see the whole table, it becomes too small to read. When one tries to zoom in to make it readable, he or she is supposed to scroll both horizontally and vertically to look through it. Well, there are several ways to avoid this problem. Reformatting the data table as a pie or mini-graph is an approved solution. The mini-graph fixes even in narrow screens.

Images in responsive web designs are called context-aware. This particular technique serves the purpose of responsive designing in true sense as the images serve at different resolutions, ranging from larger screens to smaller ones. The scaled images appear to change fluidly with the help of updated developer tools and coding languages, allowing designs to look sharp in every context.

Responsive web designing is remarkably different from traditional designing in terms of technical and creative issues, and careful use of this can do wonders while designing.

6. Can you share any lessons learned or best practices that you followed during the development process.

Ans:

1. Usability Comes First. Always
2. But… Creativity Treads On Its Heels
3. Amazing Websites Need Holistic Web Development
4. Dark Mode? Easier Said Than Done
5. Typography Counts
6. Tools Are Just Tools
7. Expand Your Horizons
8. And Don't Take Animation For Granted
9. Tell Short-Lived Design Fads From Lasting Trends
10. Learn From The Mistakes Of Others